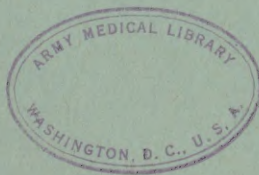


# POLIOMYELITIS IN IDAHO

1947 — 1948

A REPORT ON THE OUTBREAK OF ACUTE ANTERIOR POLIOMYELITIS AS THE  
DISEASE OCCURRED IN IDAHO  
JULY 1, 1947 TO APRIL 1, 1948

PREPARED BY  
THE IDAHO (STATE) DEPARTMENT OF PUBLIC HEALTH



BOISE, IDAHO



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FOREWORD

The task of collecting and assembling the data contained in this report grew into a tremendous undertaking as the epidemic of 1947-48 spread over a large portion of the State of Idaho.

I wish to acknowledge the work of the following groups who made it possible to prepare this report:

Local public Health Nurses  
Division of Vital Statistics  
Crippled Children's Service  
Information Service of Idaho State Health Department  
Advisory Committees from Local and State Medical Societies  
Library Staff, St. Luke's Hospital

I also wish to personally thank Dr. A. G. Gilliam, University of Michigan School of Public Health, whose guidance and leadership gave us our inspiration.

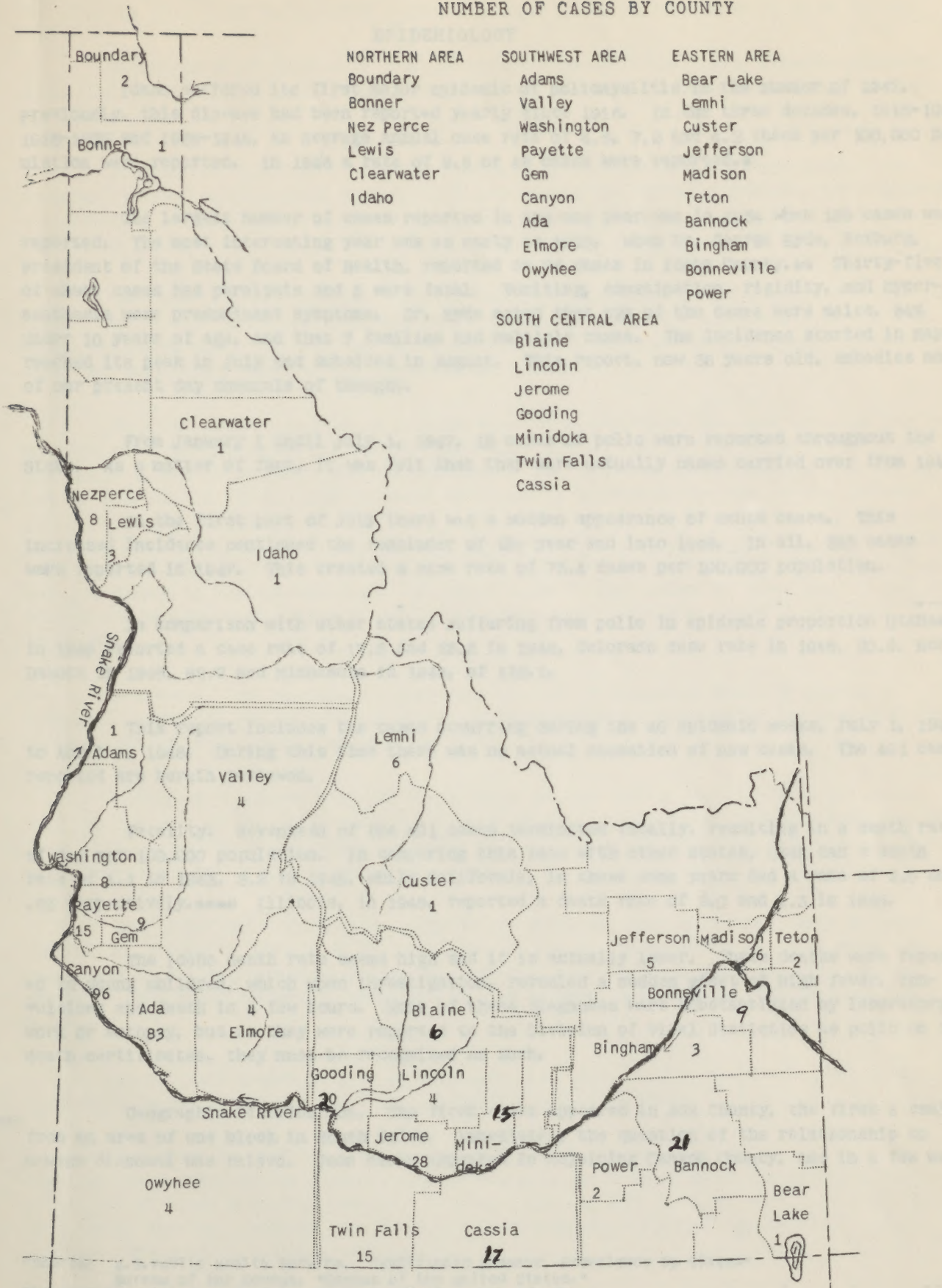
Madelene M. Donnelly, M.D.  
Director, Bureau Maternal and Child Health  
and Crippled Children's Service  
State Department of Health  
Boise, Idaho

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State of Idaho  
DEPARTMENT OF PUBLIC HEALTH  
Boise, Idaho



# NUMBER OF CASES BY COUNTY



Lemhi and Custer Counties are placed in the Eastern Area because the terrain facilitates faster transportation to Pocatello, Bannock County, than to Boise, Ada County.



# POLIOMYELITIS IN IDAHO, 1947-1948

## Part I

### EPIDEMIOLOGY

Idaho suffered its first major epidemic of poliomyelitis in the summer of 1947. previously, this disease had been reported yearly since 1916. In the three decades, 1916-1925, 1926-1935 and 1936-1945, an average annual case rate of 4.6, 7.2 and 4.2 cases per 100,000 population were reported. In 1946 a rate of 9.6 or 48 cases were reported.\*

The largest number of cases reported in any one year was in 1934 when 156 cases were reported. The most interesting year was as early as 1910, when Dr. George Hyde, Rexburg, President of the State Board of Health, reported on 76 cases in Idaho County.\*\* Thirty-five of these cases had paralysis and 5 were fatal. Vomiting, constipation, rigidity, and hyperaesthesia were predominant symptoms. Dr. Hyde noted that 62% of the cases were males, 84% under 10 years of age, and that 7 families had multiple cases. The incidence started in May, reached its peak in July and subsided in August. This report, now 38 years old, embodies many of our present day channels of thought.

From January 1 until July 1, 1947, 12 cases of polio were reported throughout the State. As a matter of fact, it was felt that they were actually cases carried over from 1946.

In the first part of July there was a sudden appearance of acute cases. This increased incidence continued the remainder of the year and into 1948. In all, 383 cases were reported in 1947. This created a case rate of 73.4 cases per 100,000 population.

In comparison with other states suffering from polio in epidemic proportion Utah\*\*\* in 1945 reported a case rate of 17.3 and 23.2 in 1946, Colorado case rate in 1946, 80.9, North Dakota in 1946, 88.7 and Minnesota in 1946, of 115.1.

This report includes the cases occurring during the 40 epidemic weeks, July 1, 1947 to April 1, 1948. During this time there was no actual cessation of new cases. The 401 cases reported are herein reviewed.

Fatality. Seventeen of the 401 cases terminated fatally, resulting in a death rate of 3.2 per 100,000 population. In comparing this rate with other states, Utah had a death rate of 4.1 in 1943, 3.2 in 1945, while California, in these same years had a rate of 2.0 and .63 respectively.\*\*\*\* Illinois, in 1943, reported a death rate of 2.0 and 1.3 in 1945.

The Idaho death rate seems high and it is actually lower. Three deaths were reported in young children, which upon investigation, revealed a sudden onset of high fever, convulsions and death in a few hours. None of these diagnoses were substantiated by laboratory work or autopsy, but as they were reported to the Division of Vital Statistics as polio on the death certificates, they must be recognized as such.

Geographic Distribution. The first cases appeared in Ada County, the first 5 coming from an area of one block in South Boise. Immediately the question of the relationship to sewage disposal was raised. Soon cases appeared in adjoining Canyon County, and in a few weeks,

\*Source: U.S. Public Health Service. "Notifiable Disease, Prevalence by States" Bureau of the Census, "Census of the United States."

\*\*Second Biennial Report of the State Board of Health of Idaho.

\*\*\*Bureau of Vital Statistics.

\*\*\*\*U.S. Public Health Service, etc.



on down the Snake River and into Washington County. Great controversy was aroused concerning the role of the Snake River in the spread of the disease. In the 6th week, cases appeared up the river in the Jerome and Minidoka areas, and later as far up the river as Teton County.

Thirty-three of Idaho's 44 counties reported cases. True, these counties border the Snake River, but so does Idaho's population with 75% of the total population living in these 33 counties.

Geographically, Idaho is divided into several distinct areas. Arbitrarily, the counties involved in polio have been divided into four areas, North, Southwest, South Central, and Eastern. In plotting the incidence of cases, it is interesting to examine these areas separately.

The total epidemic reached a sudden peak the 8th week, with a secondary rise the 11th week. Then it rose again the 17th week to its highest level with a secondary peak the 20th week. Following this, the drop was rather sudden, but a third lesser peak occurred the 27th week, approximately January 1, and continued until April.

When the State is separated into the four areas mentioned, it shows that the Southwest and South Central areas had almost identical incidence curves, the South Central being approximately six weeks later than the Southwest. The incidence in the Eastern area was quite low but starting in the 5th week extended consistently throughout the rest of the epidemic period. The Northern area suffered least, with only 16 cases. However, the cases from that area were quite severe. It is not believed that this was a matter of diagnosis, as The Idaho State Crippled Children's Service has since held several clinics throughout that area and we have not picked up undiagnosed cases. In other areas a large number of cases who had not seen doctors and had not been diagnosed were found. Such cases have been reported and placed under treatment.

Residence. The question of residence in rural or non-rural areas is usually of interest. Forty-six per cent of our cases came from non-rural areas while 54% came from rural areas. Idaho's total population is 66.2% rural.

Length of residence previous to the onset of the disease was stated in 317 cases. Fourteen per cent of the total cases had resided in their present residence for less than one year, while 64% of the total cases had lived in their homes for more than one year. Length of residence was not stated in 22% of the cases.

Sex. The ratio of males and females was about the same as usually found in other epidemics. Fifty-six percent or 225 were male and 44% or 176 were female. This ratio was maintained in all four areas of the State. Idaho's total population is 51% male. In comparing it with other epidemics, Minnesota in 1946 reported 55% male and Utah in 1945, 53% males.\*

Race. Race played no part in this epidemic. Four hundred cases were white and 1 case was a Japanese baby. Idaho's total population is 98.9% white.

Incidence in Families. The 401 cases involved 346 families. Of this total, 308 families had 1 case, 28 had 2 cases, 4 had 3 cases, 5 had 4 cases and 1 family had 5 cases. A total of 93 cases were from families in which there was more than one case. In 17 of the 38 multiple infected families, one of the affected members had bulbar involvement. In 2 families, 2 members had bulbar symptoms.

\*"Infantile paralysis in the State of Utah, 1945" by John A. Anderson, M.D.



There were a total of 1234 members in the families of the 390 polio cases; 265 of these household contacts gave a history of minor illnesses prior or subsequent to the onset of polio.

Age Incidence. The age of the patients was not unusual with 72.8% of all cases being under 15 years of age, and 2% over 40 years of age. Although a very small percentage were under 1 or over 40 years of age, the actual ages ranges from 6 weeks to 65 years. A detailed analysis of age grouping is listed and compared to that reported by Minnesota in 1946.\*\*

Age	Minnesota (1946) percent of 1187 cases	Idaho (1947) percent of 401 cases
under 5	27.4	27.9
5-9	28.7	29.2
10-14	16.7	15.7
15-19	10.0	7.5
20-24	5.9	4.0
25-29	4.8	6.5
30-34	3.2	4.2
35-39	1.7	2.7
over 40	1.5	2.0

Age apparently had no effect on the type of polio as seen from the following analysis. The percentage of spinal bulbar is highest in the second, third and fourth age group, but likewise non-paralytic and spinals are higher in these same groups.

Age Group	Non-Paralytic (119 Cases)	Spinal (194 Cases)	Spinal Bulbar (86 Cases)
under 1	3.6	3.6	2.3
1-4	18.4	30.4	21.0
5-9	26.6	27.8	37.2
10-14	21.0	10.3	21.0
15-19	10.9	7.2	2.3
20-24	4.2	3.1	5.8
25-29	9.2	6.7	2.3
30-34	2.5	6.2	2.3
35-39	1.7	2.6	4.6
over 40	2.5	2.0	1.1

Cases of undetermined type - 2.

The effect of age on recovery was most marked. This is demonstrated in graph form. In case of spinal type, percentage of recovery was more marked in the first 4 age groups, and in the group over 40. On the other hand, the spinal bulbar case fatality was definitely higher in those under one year of age and over 25. Recovery was greater in the age group of one to 14 years of age.

Pregnancy. Unlike some of the recent epidemics, pregnancy was not a factor in the Idaho episode. Only eight females were pregnant on admission. One of these aborted spontaneously. The remainder who have reached term have delivered normal babies. Deliveries were normal except in one instance where the attending obstetrician facilitated delivery with low forcep extraction.

\*\*Facts and Figures about infantile paralysis from the National Foundation for infantile paralysis.



Second Attack. One patient in this series suffered a second attack. She was a young girl of 15 who had had an attack seven years ago with a mild residual. She was in the hospital recovering from an appendectomy at the time of onset of this infection.

Home Environment. It is very hard to evaluate the sanitation of a home "good" or "poor", especially with many families in many areas differing in economics and standards.

A survey of 346 families was made with the following environmental facts noted:

Milk: 53.5% used pasteurized milk, 43.5% raw milk, 3% unstated.  
 Water: 55% used city supply, (75% of these supplies are approved by the State Department of Public Health), 36% used wells, 2% ditch water, 7% unstated.  
 Sewage Disposal: 32% on city sewer, 31% used septic tank, 31% had outdoor privies, 5% unstated.  
 Flies: present in unusual numbers in 46% homes.  
 Gnats: present in unusual numbers in 16% homes.  
 Mosquitos: present in unusual numbers in 48% homes.  
 Sick animals in 6% of the homes.

Tonsillectomies. In answer to many queries as to relationship of tonsillectomies to polio an attempt was made to tabulate this item.

The table below shows the number with tonsils out and the number with recent tonsillectomies as compared to those who had not had tonsils out and the type of polio in each case.

	Total	Tonsils in	Tonsils out	Tonsils out Less than 1 year
Number of Cases	401	232	160	41
Non-paralytic	29.7%	31.4%	24.3%	48.7%
Spinal Type	48.3%	50.8%	47.5%	34.1%
Bulbar Type	21.4%	17.2%	28.2%	17.0%

No information regarding tonsils: 9 cases.

Apparently tonsillectomy had no great effect on type of disease. Although there was some slight variation it was not of statistical significance.

In comparing recovery in groups tonsillectomized or not, we find recovery to be 44.9% in the total group, 46.5% in the untensillectomized group, 41.8% in the group with tonsils out; while in the small group having tonsils out recently, recovery was 58.5%. These variations are not significant.

In comparing recovery in the various types of polio the same is true.

Type	Total Cases	Tonsils in	Tonsils out	Tonsils out Less than 1 year
Spinal Recovered	18.5%	16.9%	21.0%	21.4%
Bulbar Recovered	31.4%	37.5%	31.1%	42.8%
Fatal	19.7%	20.0%	20.0%	14.3%

Here again, variations, according to tonsillectomies, are not large enough to be of value.



Data regarding presence or absence of tonsils in household contacts were assembled. Of the 1234 household contacts, 436 or 35% had had their tonsils removed. Minor illnesses were reported in 13% of this group. In the other group of untonsillectomized household contacts, 25% reported minor illness.

## Part II

### THE DISEASE

No attempt has been made to go into a scientific discussion of diagnosis or treatment in this paper, but rather, an attempt has been made to summarize the type of polio and the outcome.

"Non-paralytic" refers to those cases never showing any muscle weakness. "Spinal type" refers to those cases showing muscle weakness at some time during the disease. "Spinal bulbar" or "Bulbar" refers to those cases showing symptoms of bulbar involvement. The cases with only bulbar involvement were so few they have not been dealt with separately.

As to outcome, we have designated those cases with apparently no residual as "Recovered." All cases showing any muscle weakness as of April 1 are designated as "Weakness." No attempt as yet, has been made to evaluate permanency of paralysis. As this report is prepared, orthopedists and physical therapists state there are no cases not showing recovery of muscle power.

In plotting the type of polio by week of onset, we do not see any great variation of types except that the numbers of spinal types were greater than other types all the way through the epidemic.

However, if we divide the epidemic into its apparent peaks, we have three groups of cases, those in the first peak, or weeks 1-13, those in the second peak, weeks 14-27, and those in the last peak, weeks 28-40.

peak period	No. of Cases	Non-Paralytic	Spinal	Spinal Bulbar
Weeks 1-13	178	69 or 38.7%	75 or 42.1%	34 or 19.1%
Weeks 14-27	189	43 or 22.7%	98 or 51.8%	48 or 25.3%
Weeks 28-40	32	7 or 21.8%	21 or 65.6%	4 or 12.5%

During each peak there was a decrease in non-paralytic type with an increase in spinal type. Spinal bulbar was more predominant in the second peak, which was always considered to be the most severe phase of the epidemic.

Recovery by various age groups and type is demonstrated by graph form. Recovery is also listed by area of the state. Apparently recovery was less and fatality higher in the Northern and Eastern area. This may be related to the greater distance the patients have to be transported, not only to Boise but even from their home to the regional hospital.

The type of treatment in Boise was not remarkably different from that used in other epidemics. The staff met frequently and treatments and procedures were quite uniform.



There was no set procedure on spinal taps. They were not done routinely on admission as many patients had already had examination of spinal fluid. If there was doubt in diagnosis spinal taps were repeated.

Beds were equipped with boards under mattresses and at the foot. At first conventional piece packs were used. Later they were replaced by prone packs. The attending physicians felt that the patients were not as apt to be exhausted by the prone pack as the longer procedure of piece packs.

Water balance was restored, blood transfusions given and antibiotics used as indicated. Nearly all patients received physostigmine and curare was used in a few cases. Tracheotomies and bronchoscopies were done on indication. Oxygen was used frequently.

Careful consideration was given to diet. Tray diets were high in protein and protenium used in liquid nourishments. Large quantities of vitamins were given. This dietary regime was continued throughout convalescence.

The cases sent in by outside physicians were remarkably well diagnosed. There were many difficult diagnostic problems. A few cases which were particularly confusing are cited. Early in the epidemic three brain abscesses were admitted. Diagnosis was confirmed at autopsy. There was a congenital syphilis with paralysis, a tuberculosis meningitis, an influenza meningitis, a hemophilia, a case of scurvy with paralysis, 2 cases of encephalitis, and a meningococcal meningitis. Three cases had severe encephalitic symptoms and diagnosis was questionable for some time. Three patients had definite hysterical symptoms. One came in with a "paralysis" of an arm following a long ride on a crowded Saturday night bus. He had been sitting with his arm over the back of a seat. Another man developed complete paralysis while in the mountains and was carried down on a litter between horses. The resident on duty diagnosed his case by means of an ice cold test tube applied to the soles of his feet. The third case was really a psychiatric problem and gave a great deal of trouble.

Reports on respirator cases is of great interest. It is hard to arrange significant graphs on these cases as they are usually so few in number. There were 25 cases in respirators. Tracheotomies were done on 4 of these. Fifteen cases, including 2 of the tracheotomies, survived. Three cases, including the other 2 tracheotomies, are still in respirators.

Tracheotomies were done on 5 other cases. One was done almost "in extremis" while the doctor was arranging for transportation. This 10 year-old female died. The other 4, all females, aged 15, 12, 4 and 3, lived and have made good recoveries.



The following table shows the most pertinent information on respirator cases. It is apparent sex and tonsils were unimportant. Six of the 10 deaths were 34 years of age or over, 1 was under 1 year of age. Six recovered enough to be dismissed from the hospital and 6 others, although still hospitalized, are no longer in the respirator. Their ages all range from 2 to 14.

It was our experience that the younger respirator cases made better recoveries.

#### RESPIRATOR CASES

Case No.	Family No.	onset Week	Residence (County)	Sex	Age	Tonsils Out	Days in Hospital	Outcome
6	6	2	Ada	M	34	Yes	4	Fatal
19	16	2	Ada	M	6 wk.	NO	127	Fatal
25	21	4	Canyon	M	8	Yes	1	Fatal
35	30	5	Canyon	F	65	NO	5	Fatal
74	12	7	Canyon	M	13	Yes	43	Recovered Normal Activity
85	12	8	Canyon	F	14	Yes	19	Recovered Sister of above
104	90	9	Lewis	F	11	NO	216	Home Has weakness
110	95	9	Elmore	F	4	NO	31	Weakness ? Moved
168	151	12	Minidoka	M	24	NO	225+	Still in Respirator, Tracheotomy
203	179	15	Bonneville	F	25	Yes	8	Fatal Tracheotomy
240	211	17	Payette	M	4	NO	220+	Out of Respirator In hosp. Weakness
265	227	18	Cassia	M	7	NO	23+	Out of Respirator In hosp. Weakness
267	229	18	Canyon	M	35	NO	36	Fatal Tracheotomy
277	237	18	Twin Falls	F	4	NO	3	Fatal
292	250	19	Twin Falls	M	6	NO	208+	Out of Resp. In Hospital, Weakness
293	251	19	Twin Falls	M	2	NO	198+	Out of Resp. In Hosp. Weakness
309	255	20	Jerome	F	9	Yes	202+	Out of Resp. In Hosp. Weakness
311	265	20	Lewis	M	38	NO	5	Fatal
326	277	21	Bannock	F	20	Yes	3	Fatal
330	280	21	Lincoln	M	8	Yes	192+	Out of Resp. In Hosp. Weakness
350	299	22	Lemhi	M	9	Yes	78	Weakness Moved
370	314	25	Bannock	F	35	Yes	12	Fatal
371	316	25	Canyon	M	4	NO	47	Home Weakness
376	321	25	Gooding	M	17	Yes	150+	In Resp. In Hospital
410	355	35	Jerome	F	36	Yes	96+	Tracheotomy, In Resp. In Hosp.



A complete listing of the fatal cases is presented for more detailed study.

FATAL CASES							
Case No.	Residence (County)	onset (Week)	Sex	Age	Respirator	Tracheotomy	Hospital (Days)
6	Ada	2	M	34	Yes	NO	4
19	Ada	2	M	6 wks	Yes	NO	127
25	Canyon	4	M	8	Yes	NO	1
35	Canyon	5	F	65	Yes	NO	5
131	Lemhi	11	F	1	NO	NO	0
203	Bonneville	15	F	25	Yes	Yes	8
267	Canyon	18	M	35	Yes	Yes	36
277	Twin Falls	18	F	4	Yes	NO	3
284	Jerome	19	F	6	NO	NO	0
311	Lewis	20	M	38	Yes	NO	5
319	Lewis	20	M	34	NO	NO	7
325	Bannock	19	F	10	NO	Yes	1
326	Bannock	21	F	20	Yes	NO	3
333	Lemhi	21	M	6	NO	NO	1
364	payette	24	F	3	NO	NO	0
370	Bannock	25	F	35	Yes	NO	12
402	Bannock	31	F	2 mos.	NO	NO	1

To summarize the 17 deaths: 10 were female, 8 had had tonsillectomies, 5 were under 5 years of age and 6 were over 30. Eight of the cases had their onset between the 18 and 21 weeks of the epidemic.

Although it is no epidemiological importance, a summary of parts of the body involved in the patients with weakness are listed below.

No. of Cases		No. of Cases	
Spasm present	339	Abdominal involvement	42
Right Lower involvement	158	Trunk involvement	118
Left Lower involvement	154	Throat involvement	49
Right upper	73	Facial involvement	18
Left upper	66		

On June 1, 1948, at the time of writing this report, 75 patients remained in convalescent hospitals in Boise. Three of these were still in St. Lukes in respirators. From July 1, 1947 until June 1, 1948 the non-paralytic cases were hospitalized an average of 19.6 days, the spinals 110.9 days and the bulbars 78.1 days.

Two hundred thirty-one or 66 percent of the hospitalized patients were admitted within seven days following onset of symptoms and 80 or 23 percent were hospitalized during the second week of illness. The remaining 11 percent were admitted after acute period.



The average day to be admitted to the hospital was the sixth day from onset of first symptoms.

This same service cared for 13 patients from Oregon and 1 from Washington. They lived close to the Idaho border and Boise was the nearest hospital available to them. However, statistics on these cases are not included in this paper.

### Part III

#### ADMINISTRATIVE PROCEDURES

Early in July, 1947, when the first few cases appeared almost simultaneously, the administrators of the local hospitals, physicians and representatives of the Public Health Department and a representative of the National Foundation for Infantile Paralysis conferred to discuss the situation and outline plans. At first it embodied local plans but as cases came in from other areas administration became statewide.

The two local hospitals were surveyed and it was felt that St. Luke's could be better utilized for isolation purposes. Immediately all pediatric cases were transferred to St. Alphonsus and the pediatric wing of St. Luke's turned over to polio. Later this became inadequate for acute cases and another section of the first floor was used for isolation. In the beginning, St. Luke's felt that they could provide 28 beds for polio, but later hospitalized as many as 49 patients.

In the first few weeks, events moved rapidly. Almost at once it was necessary to recruit nurses and physical therapists as none were available locally. At this point, under the guidance of the National Foundation for Infantile Paralysis, a State Advisory Council was appointed by Governor Robins. This enabled the pooling of funds from all the local chapters for the council to use in care of polio patients. From July 1 until April 1 the council dispursed \$550,000 furnished by the National Foundation for Infantile Paralysis. The council consists of representatives from the State Health Department, State Government, Red Cross, Hospitals, Medical Society and the National Foundation for Infantile Paralysis. The Director of Idaho State Crippled Children's Service is chairman.

The need for such a large sum of money was due to the fact that Idaho was totally unprepared for such a case load and had no teaching medical center. In nearly all large epidemics some teaching center has been available to furnish medical care. All of Idaho's cases were on a private patient basis. The local pediatricians and orthopedists, who cared for the cases organized and rotated services. During the heaviest weeks, the need of resident service was acute and residents were hired from medical centers. Their work was invaluable, yet their periods of service were of necessity short and the rapid turn over meant confusion in many instances.

With only 28 beds at the start, it was soon necessary to find convalescent space. The Idaho State Elks Association had been planning a small convalescent home for the Crippled Children's Service for many years. Construction on the home had been delayed by the war. In August, when the need was acute, the building was hurriedly completed, and patients moved in. Later an addition was added and now is an 85 bed convalescent home. Until this unit was ready, convalescent patients were housed temporarily at Veteran's Hospital, St. Alphonsus Hospital and the State Health Department's Rapid Treatment Center.

In this expansion, it was necessary to buy full hospital equipment and supplies. All polio wards had to be rewired to carry the load required by packing machines and respirators.



Interest in the situation in Idaho resulted in the loan of two epidemiologists to the State, one from the University of Michigan School of Public Health and the other from Children's Hospital Research Foundation, Cincinnati. Although neither of these men could stay long. Their epidemiological work was of great assistance.

As polio appeared in other areas of the State, most of the patients were sent to Boise. Idaho Falls, Pocatello and Lewiston were able to hospitalize a few acute cases before they were sent to Boise for convalescent care. Eight patients from Idaho Falls were sent to Salt Lake City for convalescence. In all, from July 1, 1947 to April 1, 1948, 305 acute cases were hospitalized at St. Luke's Hospital and 320 cases received convalescent care in Boise. Only 62 of the 401 cases were not hospitalized at all.

With patients coming from many areas, it became very difficult to keep the family doctor informed of the patient's progress. There were no medical stenographers available. Crippled Children's Service loaned one to the hospital for 8 weeks but the press of follow-up clinics necessitated her return to the Crippled Children's Agency.

The task of finding equipment was ably handled by the local chapter of the National Foundation for Infantile Paralysis. Hot pack machines, respirators and other equipment were sent from almost every part of the country through their efforts.

When patients were ready for discharge it was necessary to organize follow-up clinics. This was done by the Idaho State Health Department Crippled Children's Service. At first they were held only in Boise but expanded to Twin Falls and Pocatello. When the regular Crippled Children's Clinics were held in the fall and spring, extra time was added to accommodate polio patients.

The follow-up service demonstrated the need for continued physical therapy. As the number of patients sent home increased, therapists were assigned to local areas. The service of these physical therapists were provided by the National Foundation for Infantile Paralysis under the direction of the Crippled Children's Service. At present, eight areas, Boise, — Caldwell, Pocatello, Idaho Falls, Twin Falls, Rupert, Jerome and Wendell, are being covered by seven therapists. Their load is constantly increasing and it will soon be necessary to add another therapist.

One of the most unusual features of the treatment of these 401 patients has been their complete and prolonged care. Only 27 patients have not been under the guidance of this central convalescent center. Eight have been lost by the family's moving away from the State and five have been transferred to hospitals in other states for the same reason. The remainder are being followed through the out-patient clinic service.

In the early months the patients were too sick and too busy with treatment to allow much occupational therapy, but this has been added as recovery progressed. The patients are now having their time well filled with therapeutic occupational and recreational activities.

For the past six years the Idaho State Crippled Children's Society has provided two part time teachers to serve the children hospitalized in Boise under the Crippled Children's program. They were ready to start teaching in September but it was January before many of the patients were ready for study. The service was inadequate for the large number of children, even with the addition of a third teacher. The convalescent home was so crowded there was not adequate area for group teaching and it was necessary to do bedside work. Plans are under way to enlarge this service by next fall.



The Crippled Children's Service was without a medical social worker. Here again it was almost impossible to find anyone locally with this training. A social worker was employed who was of great help in preparing parents and homes for the return of the patient. It was not until January that the National Foundation for Infantile Paralysis was able to find a well trained medical social worker. She has found many problems and it is almost impossible for her to help all in need of aid.

Public health nurses of the state acted as case finders, thus insuring early and adequate medical care for many cases. They helped families make the necessary emotional adjustment to one of their members having poliomyelitis. They helped to improve home environment and made follow-up visits and still continue this service to insure best use of medical and physical therapy treatment provided. Where ever there was a lack of trained personel to provide necessary services, public health nurses functioned until such personnel was obtained

The American Red Cross recruited a total of 260 nurses. This was a terrific task for the organization. Housing for the nurses was difficult. The Red Cross and other organizations did everything they could to find adequate rooms or apartments. In some instances, local people were afraid to rent to anyone caring for polio patients.

During December, January and February we had as many as 125 patients hospitalized in Boise. They were at St. Luke's Hospital, St. Alphonsus Hospital, The Elks Home and The Rapid Treatment Center. It was very hard to keep each unit adequately covered for nursing service.

The polio advisory council assigned one nurse to the Red Cross as placement supervisor. She visited all areas daily and became familiar with their needs. She then interviewed all new recruits and placed them where needed and where individual training was best utilized.

During the epidemic publicity involving new cases, releases from hospitals and convalescent units and reports of deaths were handled through one source. This proved extremely satisfactory from the viewpoints of the newspapers and radio stations, as well as hospital, medical and public health officials. Every effort was made to keep the public informed as to the polio situation without creating panic or hysteria so frequently observed in outbreaks of the disease.

A few local papers used pictures of hospitalized patients receiving treatment for purpose of fund-raising. This created unnecessary apprehension to many parents.

Working relationships between all agencies has been very good and it was only through such cooperation that we were able to combat the epidemic.

#### PART IV

##### REVIEWS AND FUTURE PLANS

After the first of the year the State Polio Advisory Council tried to review their activities, criticize policies and formulate plans for the future. All people participating in the work and referring physicians were contacted and we have attempted to correlate all of these various ideas and suggestions.

The referring physicians had only two main complaints, the distance the acute patient had to travel and the lack of information about patients.



The council, from an administrative point of view, criticized the lack of uniformity in reports and bills from the variety of people from whom services or materials were purchased.

The local hospitals main complaint was the need of orientation and organization of recruited personnel. They also voiced the need of more auxiliary service in the acute stage, for example, a dietician who could work directly in the isolated units.

Having summarized all sources of comment, the following recommendations are made:

1. Acute Center. Acute centers should be developed in the Eastern and Northern areas. This would embrace equipment of hospitals, training of local doctors, long range recruitment of local people for training in polio nursing and physical therapy. Working relationship should be developed among the staffs of hospitals where acute centers are located to improve treatment and reporting. An acute center should be developed in Boise which would not completely disrupt other pediatric service. It is felt that many doctors will continue to refer patients to this area.

2. Convalescent Care. Convalescent care should continue to be centralized in Boise until such a time that orthopedists are available in other areas.

3. Out Patient. Out patient physical therapy and follow-up clinic service should continue.

4. Nursing Service. Emphasis should be maintained on recruiting and training local personnel wherever possible.

When necessary to recruit emergency nurses, each hospital so concerned should prepare and organize a staff to control:

- a. Administration of nursing service.
- b. Orientation of recruits to physical set up of hospital and existing policies and practices.
- c. Expansion of hospital facilities to accomodate larger staff.
- d. Organization of in-service training classes.

The Red Cross should be given assistance in placement of nurses. Use of a nurse supervisor of placement is highly recommended.

There is need for a nurse to coordinate all nursing service in hospitals, convalescent centers and homes. This coordinating nurse should be a member of the advisory council with a background of training and experience in hospital work and in public health.

5. Referral of patients. All doctors should be notified of technique to be used in referring a patient. It is recommended that each local physician contact the acute hospital directly in requesting a bed.

6. Finance and Fees. A fee schedule, approved by the State Medical Association, should be instituted to equalize charges. If payment is to be handled through a central committee, it is recommended that a uniform charge slip be issued to everyone giving service. This would save many bookkeeping hours.

7. Medical Secretary. Every acute and convalescent center should have adequately trained secretarial personnel to permit frequent communications to family and family doctor.



8. Medical Social Work. This service is considered to be very vital and should be increased as personnel is available.

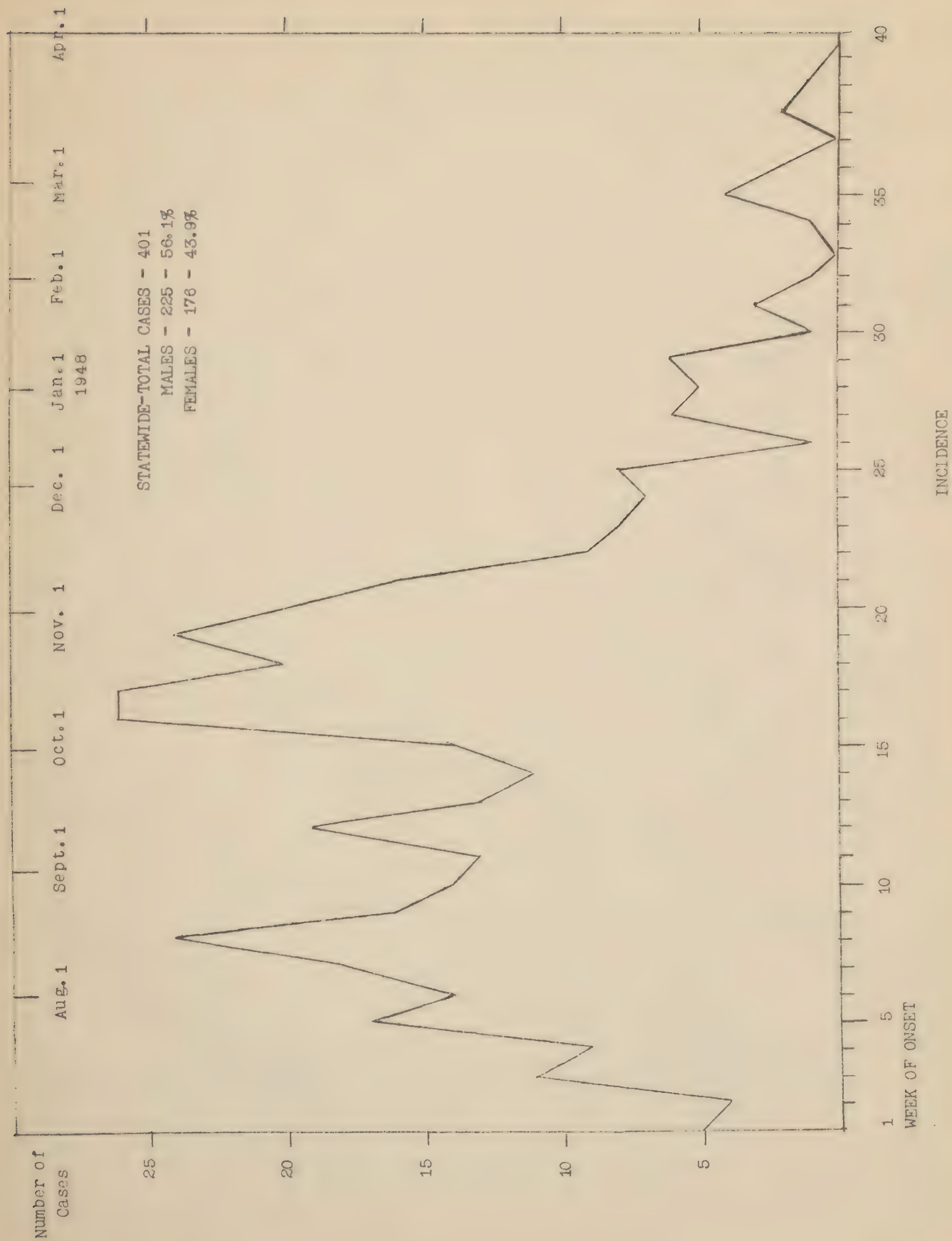
9. Mental Hygiene. The readjustment necessary to accept the physical handicap which poliomyelitis may cause, often gives rise to major emotional disturbance in both patient and family. Mental hygiene service should be available to these individuals.

10. Auxiliary Service. This applies particularly to convalescent centers. Teaching and occupational and recreational therapy should be developed.

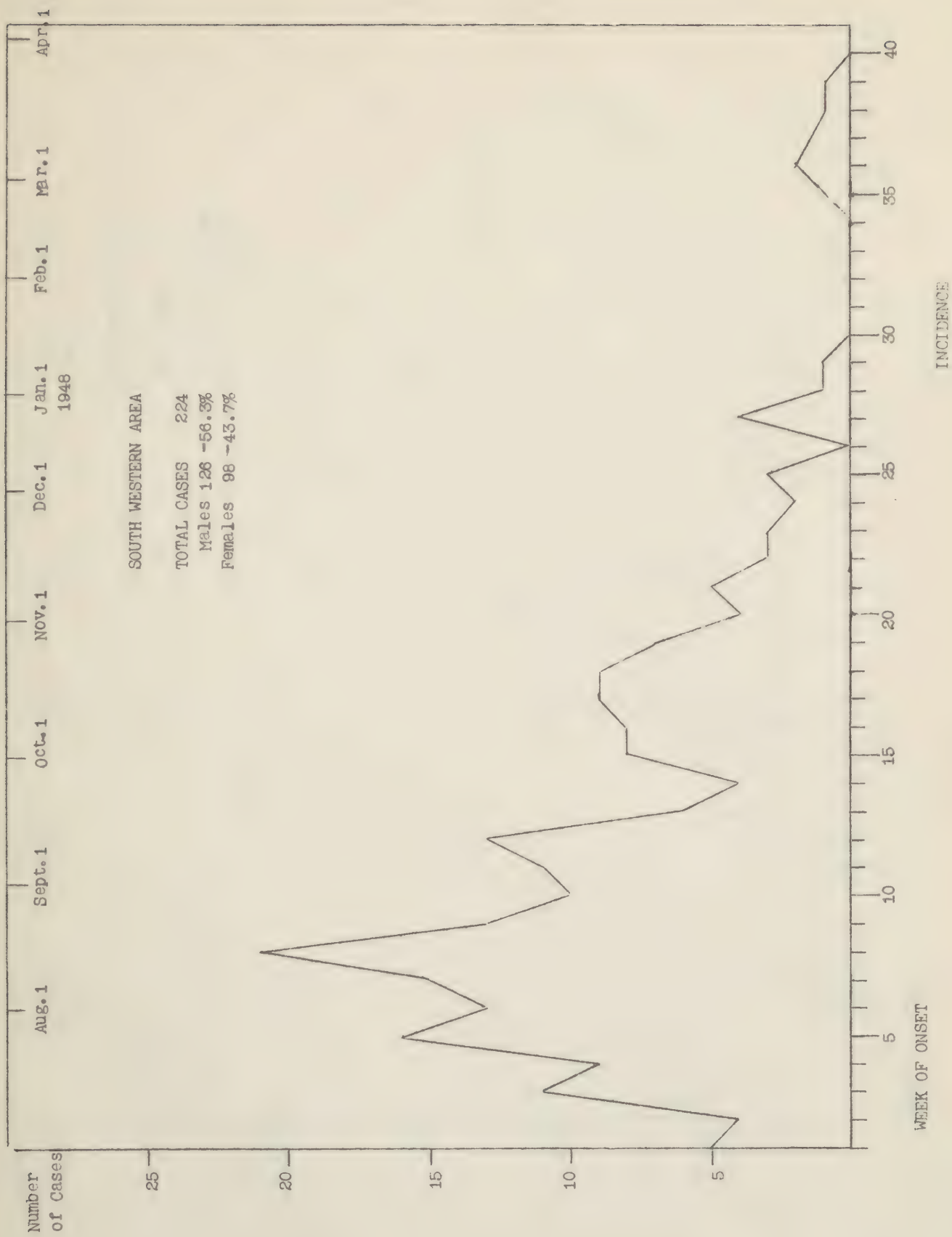
11. Rehabilitation. All services should center on rehabilitation of the patient. Vocational rehabilitation should enter into care and planning for these patients eligible for for their service.

12. Publicity. The public should be truthfully informed of incidence but "scare" articles and headlines must be avoided. Honest, helpful articles as to cause and protection against polio are appreciated by the public. Actual names and addresses of patients should not be published. This is a source of annoyance to the family at a time when it is emotionally upset. Many curiosity seekers and even well meaning individuals are prone to approach them asking questions, seeking or giving advice, adding to their problem.

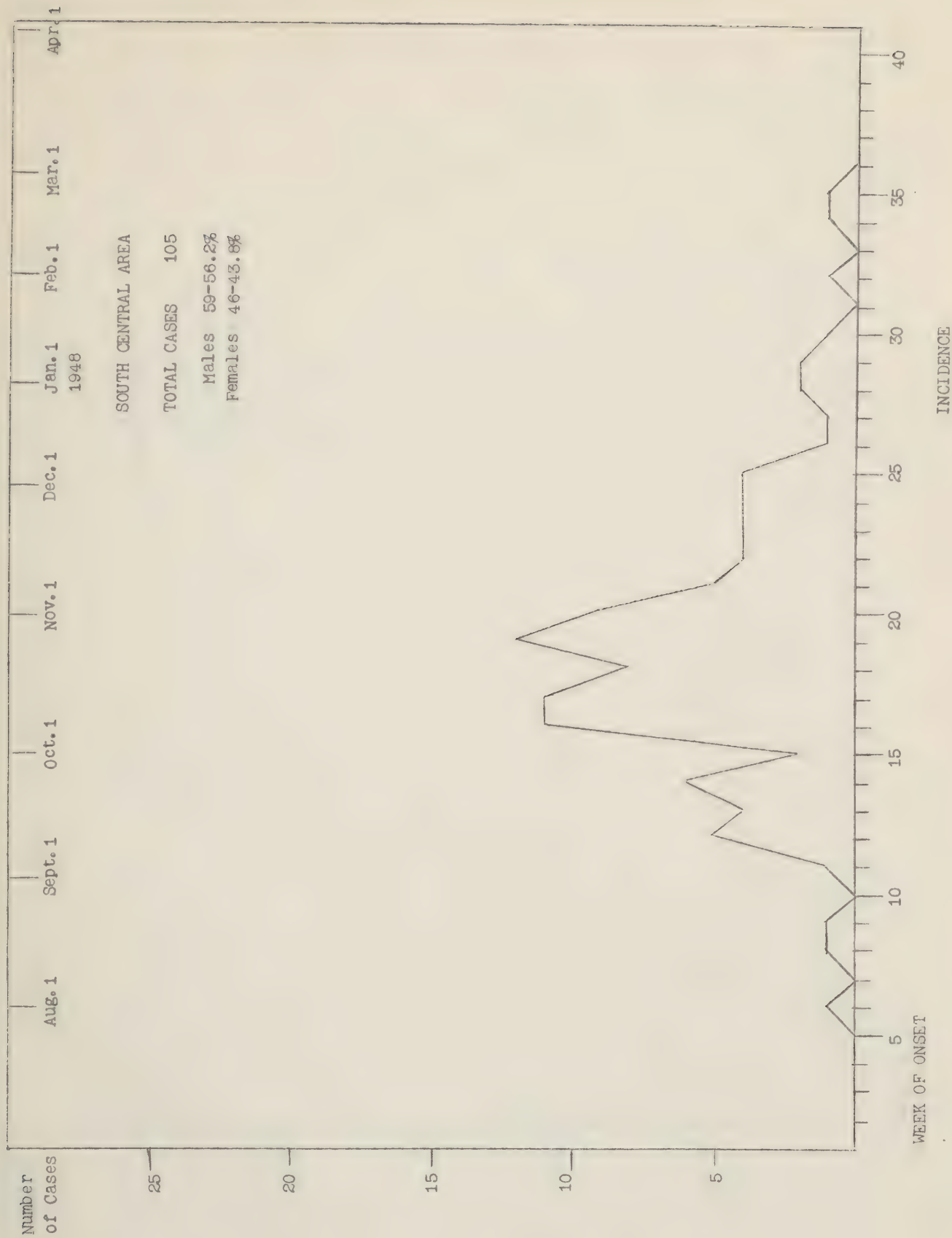


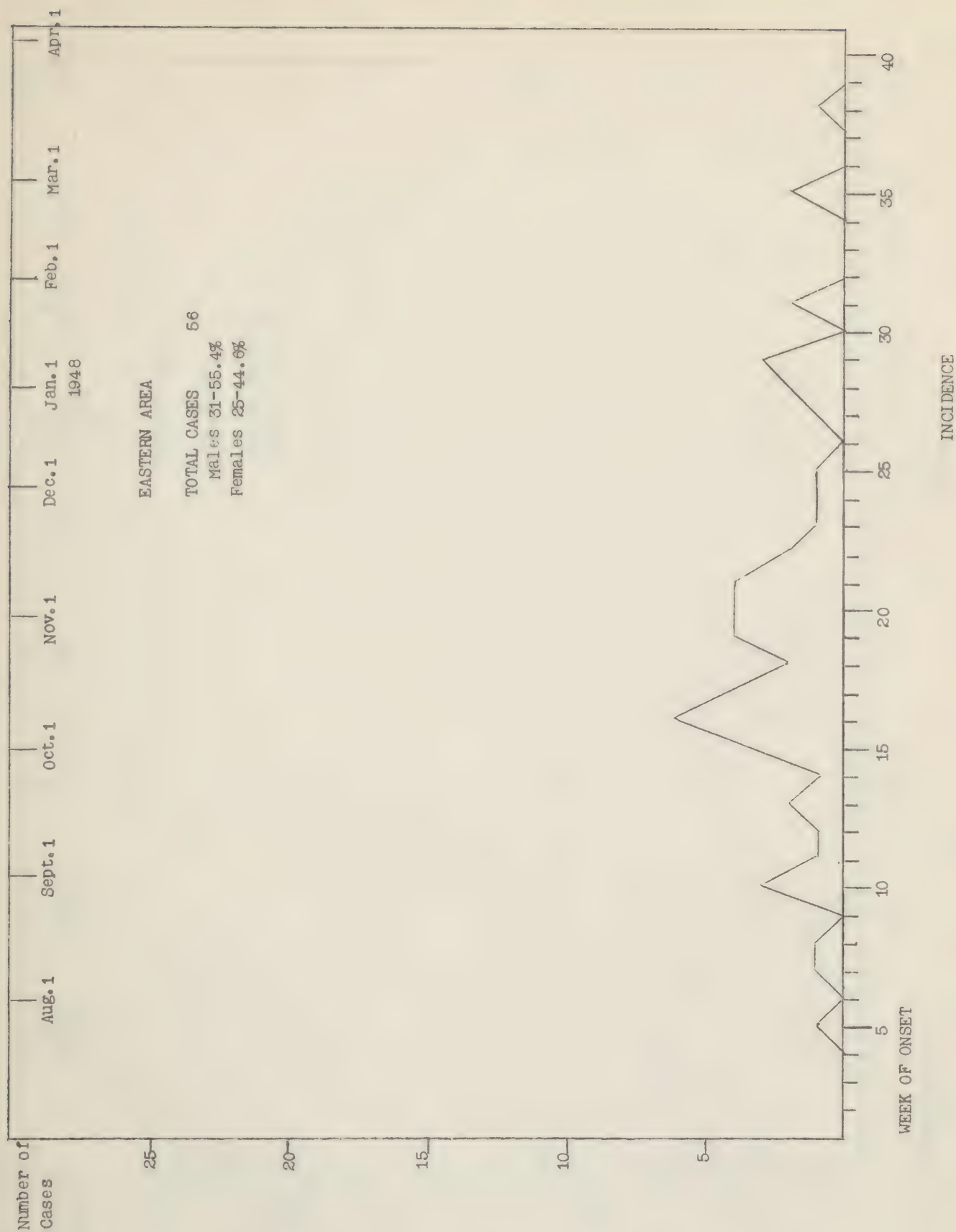




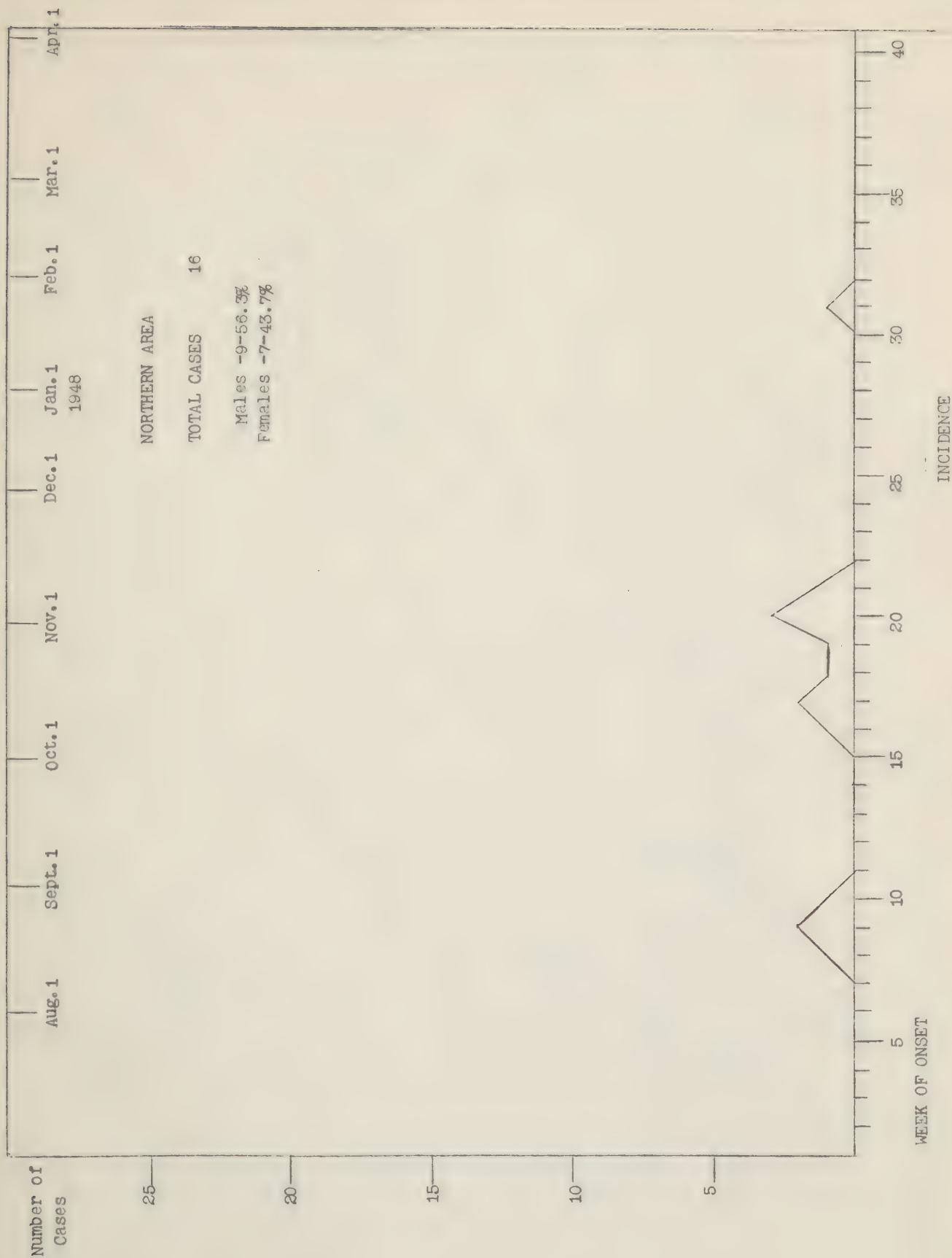


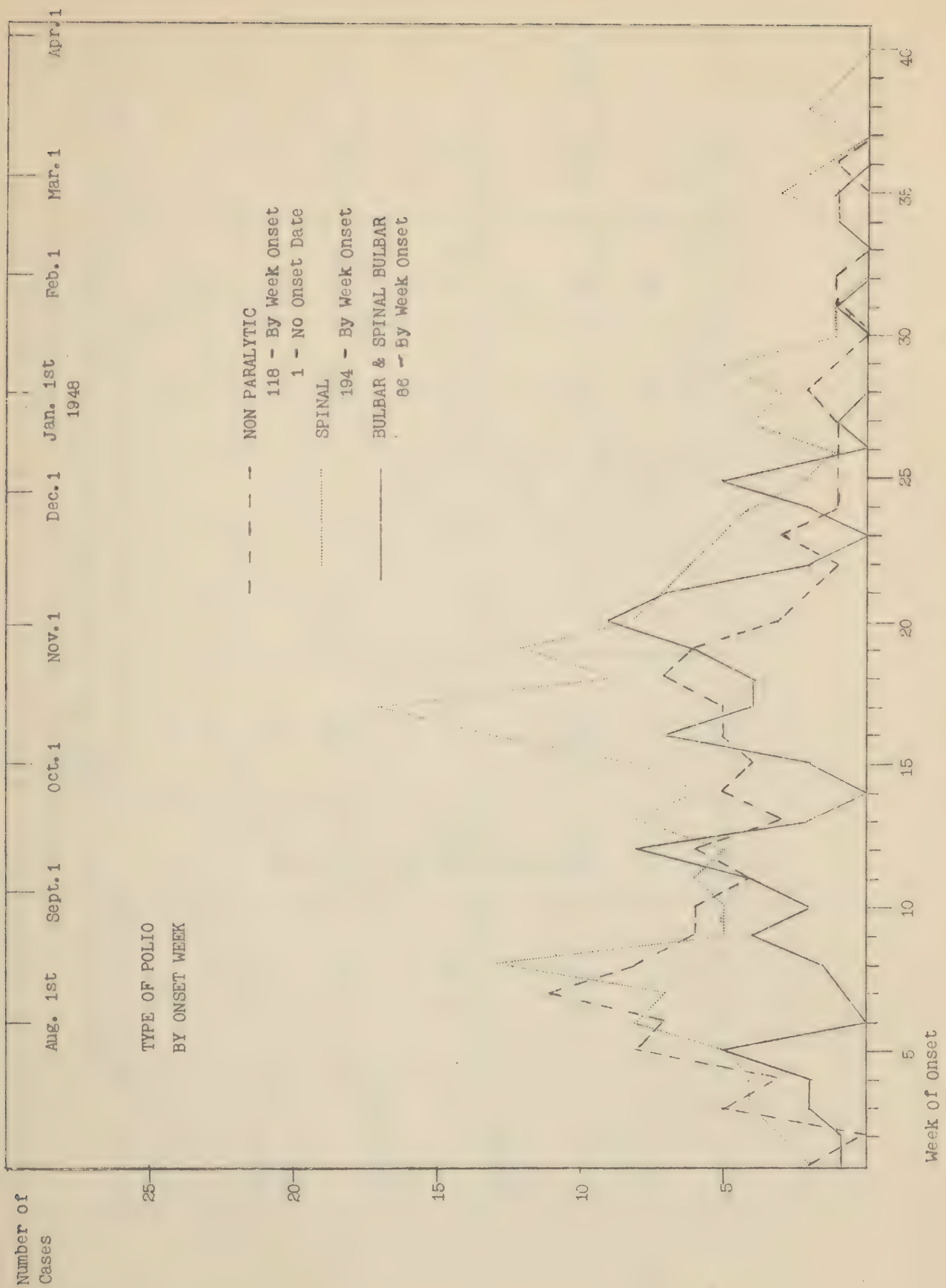










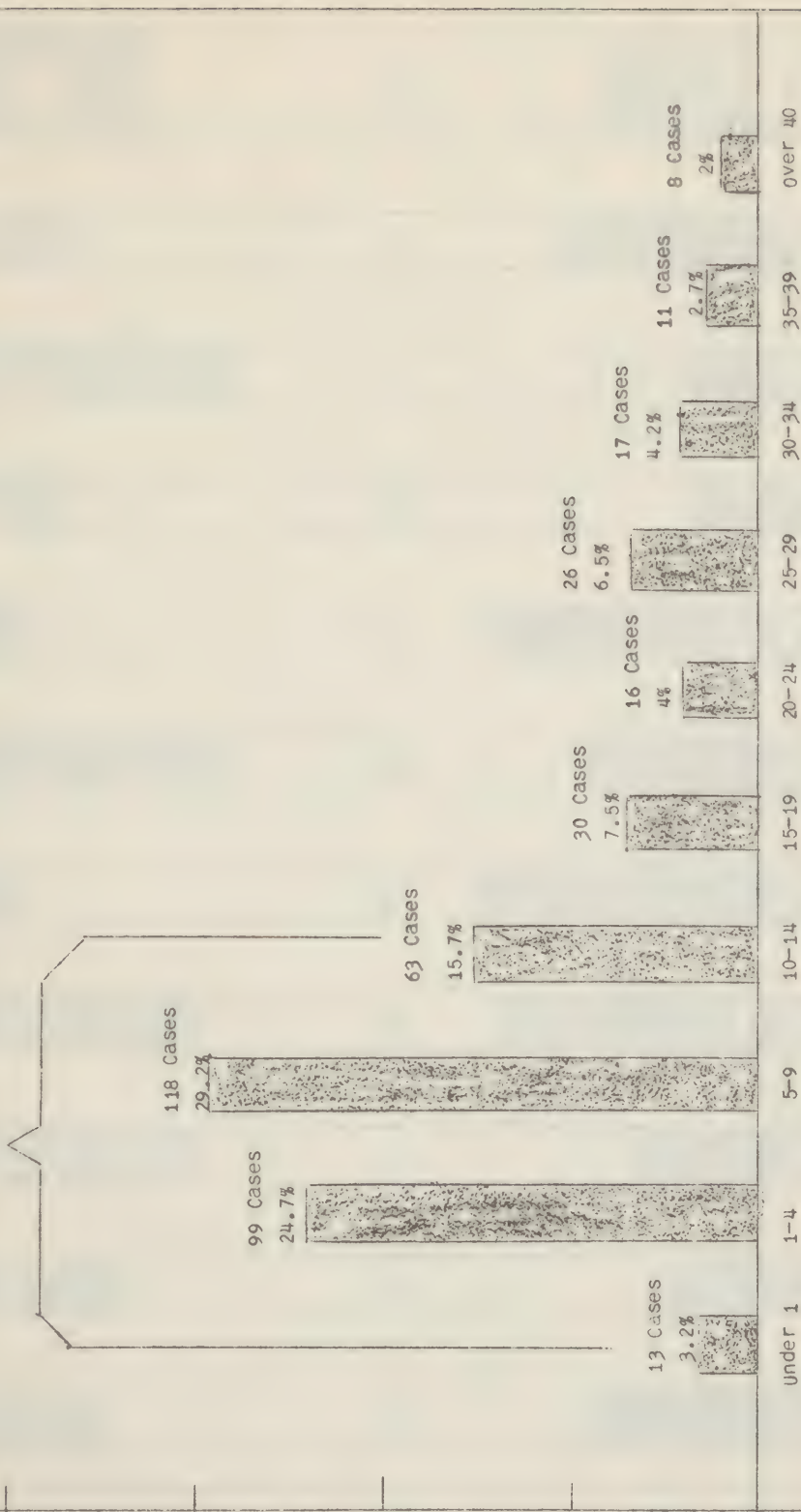




	TYPES OF POLIO				Total	OUTCOME AS OF JUNE 1, 1948				
	Non paralytic	Spinal	Bulbar And Spinal Bulbar			Not Known	Recovered	Weakness	Fatal	Not Known
State	119 29.7%	194 48.4%	86 21.4%	2 .5%	401	180 44.9%	200 49.8%	17 4.2%	4 1.0%	
South West Area	77 33.4%	105 46.8%	41 18.3%	1 .4%	224	112 50%	104 46.4%	6 2.7%	2 .9%	
South Central Area	27 25.7%	52 49.5%	26 24.8%	0	105	44 41.9%	59 56.2%	2 1.9%	0	
Northern Area	1 6.3%	9 56.2%	5 31.2%	1 6.3%	16	4 25%	8 50%	2 12.5%	2 12.5%	
Eastern Area	14 25.0%	28 50%	14 25%	0	56	20 35.7%	29 51.8%	7 12.5%	0	

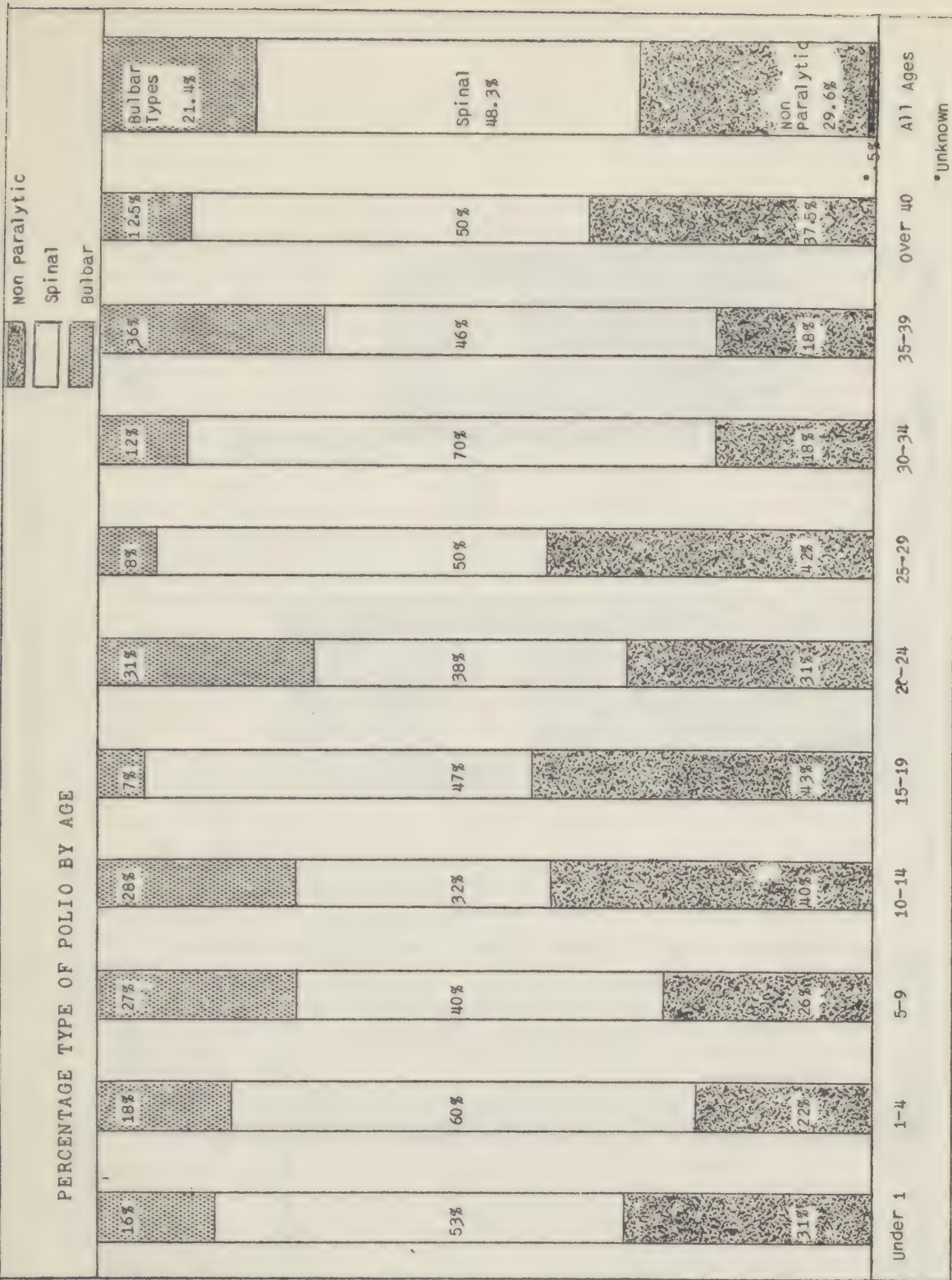
# NUMBER AND PERCENTAGE OF CASES BY AGE

72.8% ALL CASES  
UNDER 15 YEARS OF AGE



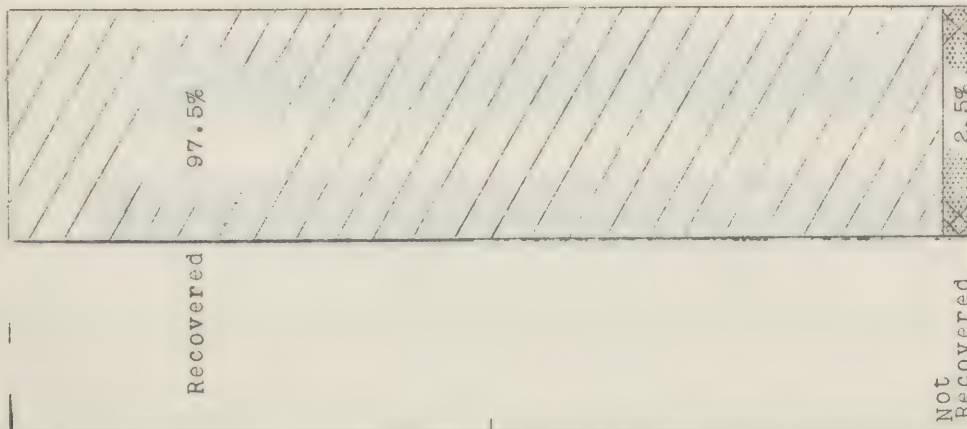


PERCENTAGE TYPE OF POLIO BY AGE

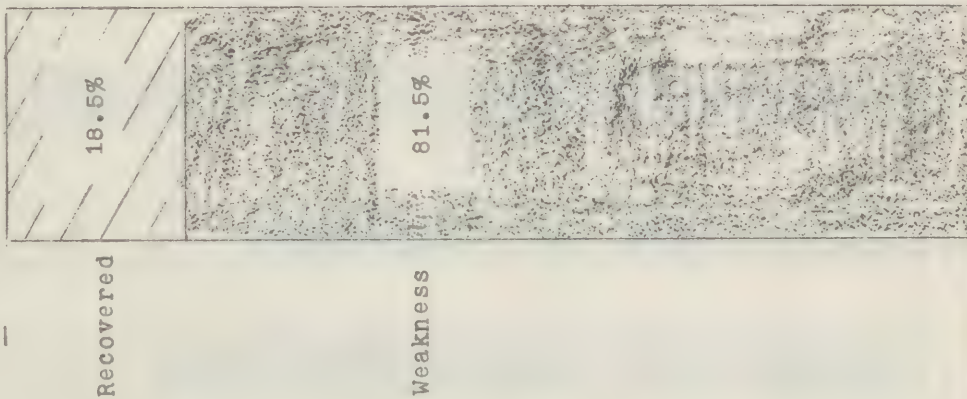


# OUTCOME ACCORDING TO TYPE

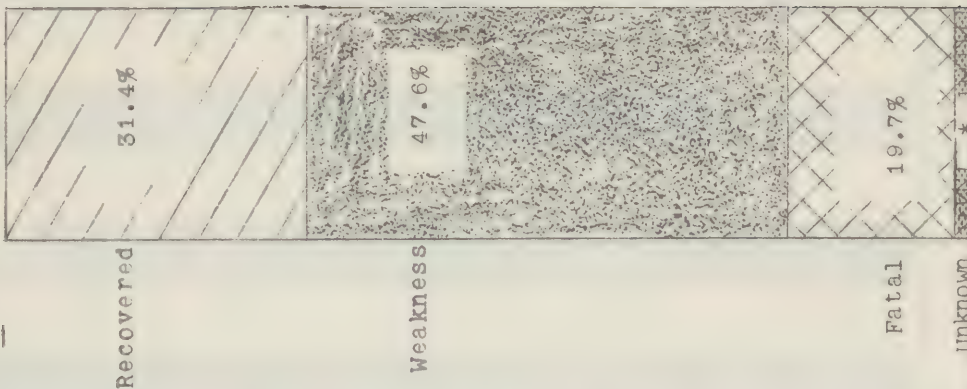
## NON PARALYTIC



## SPINAL



## BULBAR

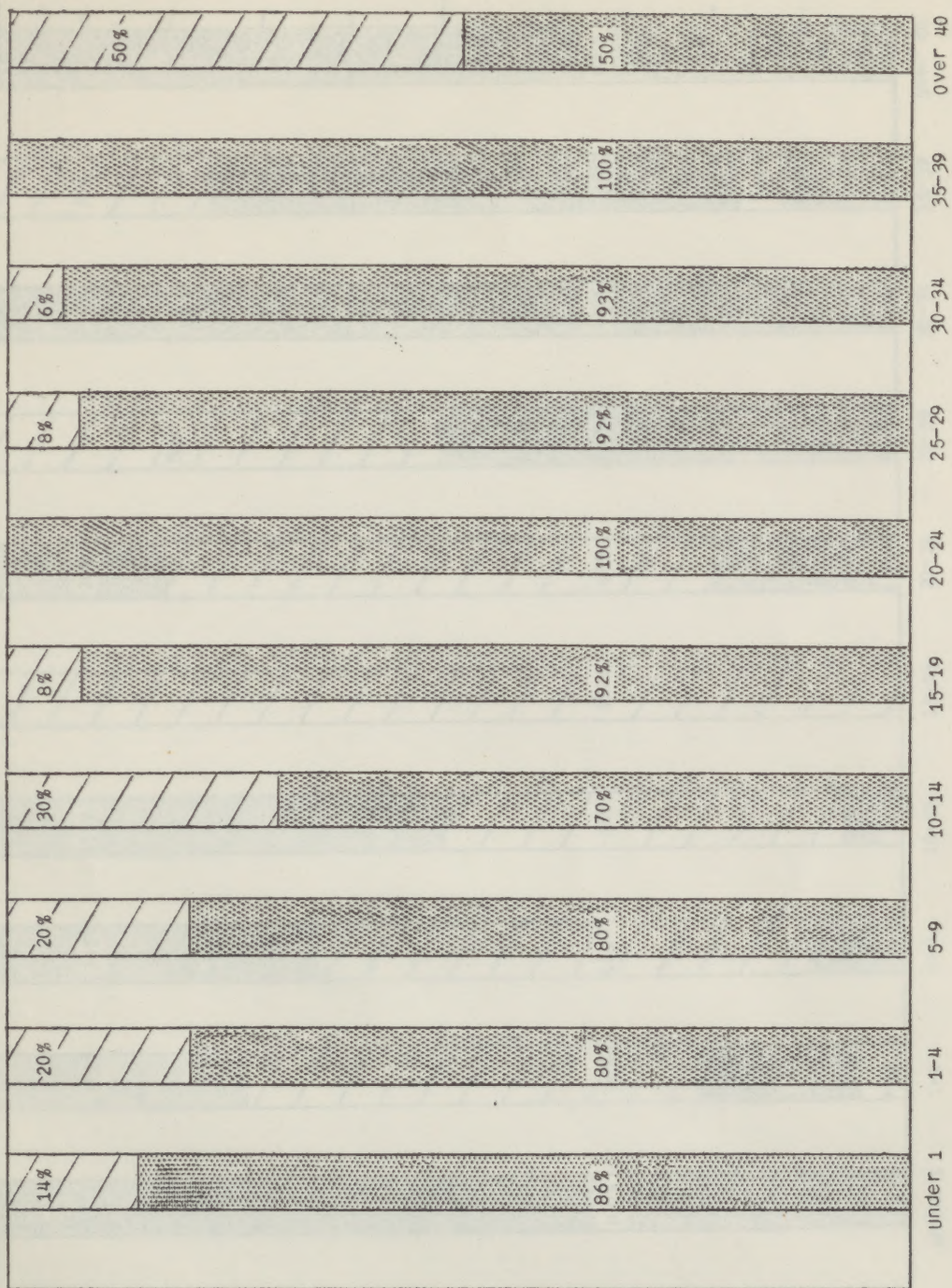


\* 1.3%



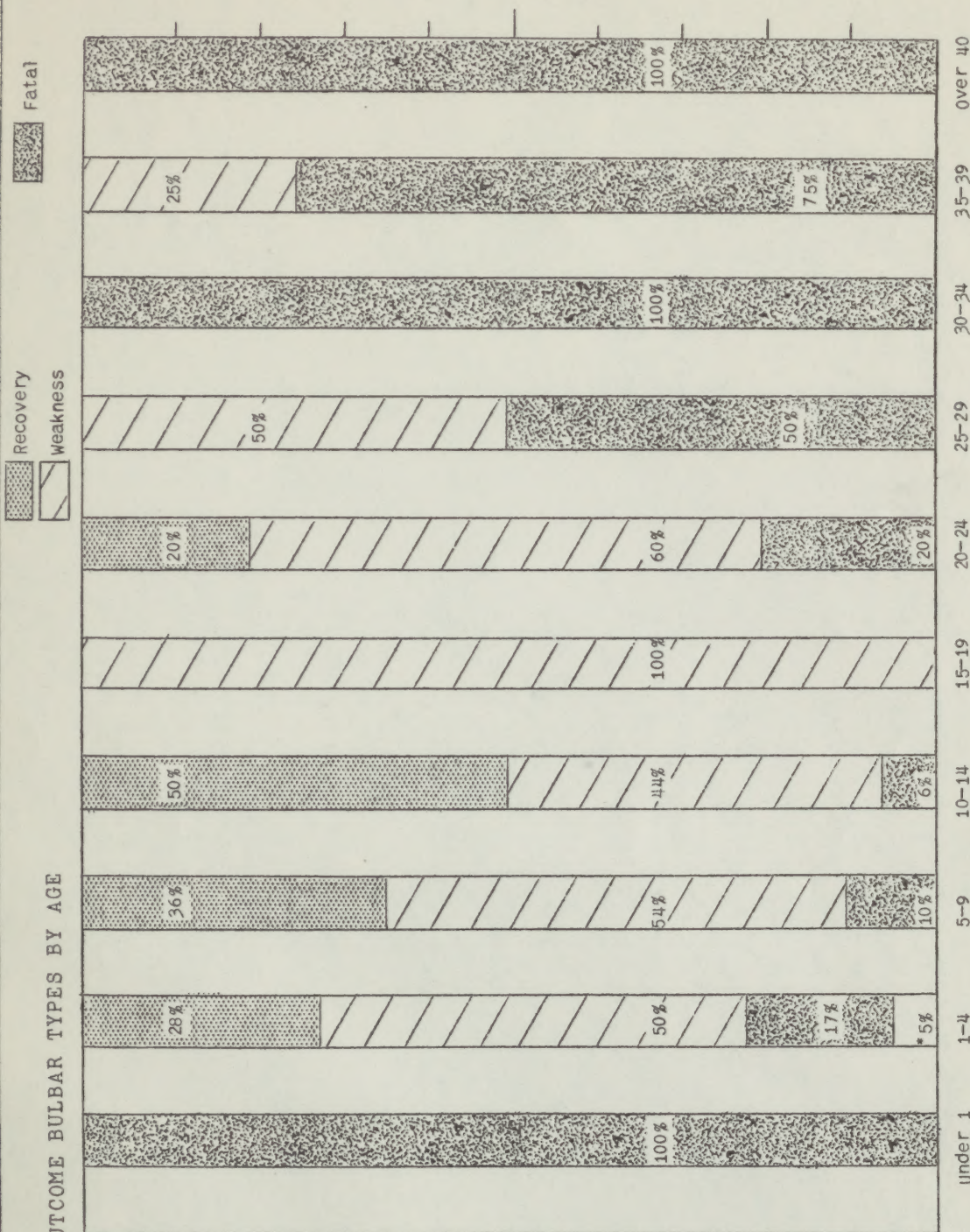
# OUTCOME SPINAL TYPES BY AGE

Completely Recovered  
 Weakness





# OUTCOME BULBAR TYPES BY AGE



\*Outcome unknown

